Paper No. 15

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

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Ex parte HIROMI OHSHITA

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Appeal No. 2000-0744
Application No. 09/052,162

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ON BRIEF

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Before THOMAS, KRASS, and GROSS, Administrative Patent Judges.

KRASS, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the final rejection of claims 1 and 2.

The invention is directed to a resolver used in a motor. In particular, the resolver is alleged to have an improved simplified structure. The resolver comprises a ring-shaped rotor of magnetic material wherein the rotor does not have a winding. The outer periphery of a ring-shaped stator is directly exposed to the outside or abuts the inner periphery of a motor case. The inner periphery of the rotor is also directly exposed to

the outside, or in direct contact with the outer periphery of the shaft of the motor.

Independent claim 1 is reproduced as follows:

1. A resolver, comprising:

> a ring-shaped rotor that is composed of a magnetic material, does not include a winding, and is rotatably disposed inwardly of a ring-shaped stator having a stator winding, wherein the outer periphery of the ring-shaped stator is directly exposed and the inner periphery of the ring-shaped rotor is directly exposed.

The examiner relies on the following reference:

Harned et al. [Harned] 4,772,815 Sept. 20, 1988

Claims 1 and 2 stand rejected under 35 U.S.C. § 102(b) as anticipated by Harned.

Reference is made to the briefs and answer for the respective positions of appellant and the examiner.

OPINION

The examiner's case, in toto, is that "Harned...discloses a resolver built into a motor case where the stator abuts the case and the rotor is fitted onto the motor shaft" [final rejection-page 2].

Appellant contends that Harned discloses a conventional rotational position transducer comprising a rotor and a stator but that Harned is "silent regarding any specific manner of attaching either the rotor pole pieces 34, 36 or transducer rotor 40 to the shaft 22. Appellant contends that Harned uses the same conventional method of

attaching a rotor to a shaft as disclosed by appellant's admitted prior art in Figure 1 of the instant application and that Harned uses an additional "hollow shaft" in between the rotor and the motor shaft. It is appellant's position that the two vertical lines adjacent elements 32, 34, 36, 38 and 40 in Figure 1 of Harned "indicate that a structure separate from shaft 22 is shown" [principal brief-page 3] because if the surface adjacent these elements were part of the shaft 22, there would be only one vertical line.

Appellant distinguishes the instant claimed invention from Harned in that the former defines "a structure where the rotor is directly exposed, or is in direct contact with the motor rotating shaft" [principal brief-page 3], something which is not taught or suggested by Harned.

The examiner agrees that Harned is silent as to the meaning of the vertical line but argues that the thin line is a part of the rotor and is illustrated to show a larger diameter of the shaft, wherein the shaft has varying diameters, ranging from a thin diameter at external locations to a medium diameter across from bearings 20 to a large diameter where the motor rotor and the resolver rotor are located. The examiner contends that the thin line between the rotor and the shaft is an additional thickness of the shaft itself [see pages 3-4 of the answer].

Both appellant and the examiner agree, as do we, that Harned is completely silent as to the meaning of the vertical line adjacent the rotors in Figure 1. The examiner argues

that the line indicates the shaft, the rotor is directly adjacent the shaft, hence the inner periphery of the rotor is "directly exposed" and the claim language is met. Appellant argues that this line is indicative of a hollow shaft separating the rotor from the motor shaft, as in prior art Figure 1 of the application, so that the inner periphery is not "directly exposed," as claimed.

Since Harned is silent as to the meaning of this line, any conclusion to be reached can only be based on speculation. An ambiguous reference will not support a section 102 rejection. In re Hughes, 345 F.2d 184, 145 USPQ 467 (CCPA 1965). Accordingly, we will not sustain the rejection of claims 1 and 2 under 35 U.S.C.
§ 102(b) based on Harned.

The examiner attempts to bring in a reference to "Kieffer" [answer-page 4] to explain the rejection, but Kieffer forms no part of the statement of rejection and we will, therefore, not consider it. Where a reference is relied on to support a rejection, whether or not in a minor capacity, there would appear to be no excuse for not positively including the reference in the statement of the rejection. In re Hoch, 428 F.2d 1341, 1342 n.3, 166 USPQ 406, 407 n.3 (CCPA 1970).

We would also note that, while not argued by appellant, if "directly exposed," as claimed, is taken to mean that there is no case or housing around the element, as intended

by the specification and shown in the differentiation of instant Figure 2 from instant Figure 1, then motor stator 28 and transducer stator 30 in Harned cannot be said to meet the instant claim language because it would appear that the outer peripheries of stators 28 and 30 are not “directly exposed” but, rather abut housing sleeve 24.

The examiner’s decision rejecting claims 1 and 2 under 35 U.S.C. § 102(b) is reversed.

REVERSED

JAMES D. THOMAS Administrative Patent Judge	)
ERROL A. KRASS Administrative Patent Judge	) BOARD OF PATENT) APPEALS) AND) INTERFERENCES
ANITA PELLMAN GROSS Administrative Patent Judge	)

eak/vsh

SUGHRUE, MION, ZINN,
MACPEAK & SEAS
2100 PENNSYLVANIA AVENUE, NW
WASHINGTON, DC 20037